27. A light coupling element as claimed in claim 25, including indentations (5, 5_1, 5_2) disposed between the elevations (7, 7_1, 7_2) and being substantially of equal depth.

28. A light coupling element as claimed in claim 24, wherein the indentations (5_1, 5_2) are linear.

29. A light coupling element as claimed in claim 25, wherein the elevations (7_1, 7_2) are linear.

30. A light coupling element as claimed in claim 24, wherein the first and further sets of indentations (5_1, 5_2) are linear and intersect at right angles and the distances (d_0) of successive equidistantly parallel indentations (5_1, 5_2) are equal.

31. A light coupling element as claimed in claim 25, wherein the first abd further sets of elevations (7_1, 7_2) are linear and intersect at right angles and the distances (d_0) of successive equidistantly parallel elevations (7_1, 7_2) are equal.

32. A light coupling element as claimed in claim 24, wherein distances (d_0) of successive equidistantly parallel indentations (5_1, 5_2) are selected as follows:

$$200 \text{ nm} \leq d_0 \leq 20000 \text{ nm}.$$

33. A light coupling element as claimed in claim 24, wherein distances (d_0) of successive equidistantly parallel indentations (5_1, 5_2) are selected as follows:

$$40 \text{ nm} \leq d_0 \leq 4000 \text{ nm}.$$

34. A light coupling element as claimed in claim 24, wherein distances (d_0) of successive equidistantly parallel indentations (5_1, 5_2) are selected as follows:

$$100 \text{ nm} \leq d_0 \leq 1200 \text{ nm}.$$

35. A light coupling element as claimed in claim 25, wherein distances (d_0) of successive equidistantly parallel elevations (7_1, 7_2) are selected as follows:

$$200 \text{ nm} \leq d_0 \leq 20000 \text{ nm}.$$

36. A light coupling element as claimed in claim 25, wherein distances (d_0) of successive equidistantly parallel elevations (7_1, 7_2) are selected as follows:

$$40 \text{ nm} \leq d_0 \leq 4000 \text{ nm}.$$

37. A light coupling element as claimed in claim 25, wherein distances (d_0) of successive equidistantly parallel elevations (7_1, 7_2) are selected as follows:

$$100 \text{ nm} \leq d_0 \leq 1200 \text{ nm}.$$

38. A light coupling element as claimed in claim 24, wherein the distances (d_0) of successive equidistantly parallel indentations (5_1, 5_2) relative to the selected wavelength λ in air are selected as follows:

$$0.1\,\lambda \leq d_0 \leq 10\,\lambda.$$

39. A light coupling element as claimed in claim 24, wherein the distances (d_0) of successive equidistantly parallel indentations (5_1, 5_2) relative to the selected wavelength λ in air are selected as follows:

$$0.2\ \lambda \leq d_0 \leq 2\ \lambda.$$

40. A light coupling element as claimed in claim 24, wherein the distances (d_0) of successive equidistantly parallel indentations (5_1, 5_2) relative to the selected wavelength λ in air are selected as follows:

$$0.5\ \lambda \leq d_0 \leq 0.6\ \lambda.$$

41. A light coupling element as claimed in claim 25, wherein the distances (d_0) of successive equidistantly parallel (7_1, 7_2) relative to the selected wavelength λ in air are selected as follows:

$$0.1\ \lambda \leq d_0 \leq 10\ \lambda.$$

42. A light coupling element as claimed in claim 25, wherein the distances (d_0) of successive equidistantly parallel (7_1, 7_2) relative to the selected wavelength λ in air are selected as follows:

$$0.2\ \lambda \leq d_0 \leq 2\ \lambda.$$

43. A light coupling element as claimed in claim 25, wherein the distances (d_0) of successive equidistantly parallel (7_1, 7_2) relative to the selected wavelength λ in air are selected as follows:

$$0.5\ \lambda \leq d_0 \leq 0.6\ \lambda.$$

44. A light coupling element as claimed in claim 24, wherein the depth d_T of the indentations is 0.2 nm to 20000 nm.

45. A light coupling element as claimed in claim 24, wherein the depth d_T of the indentations is 10 nm to 400 nm.

46. A light coupling element as claimed in claim 24, wherein the depth d_T of the indentations relative to the selected wavelength λ in air is selected as follows:

$$0.001\ \lambda \leq d_T \leq 10\ \lambda.$$

47. A light coupling element as claimed in claim 24, wherein the depth d_T of the indentations relative to the selected wavelength λ in air is selected as follows:

$$0.01\ \lambda \leq d_T \leq \lambda.$$

48. A light coupling element as claimed in claim 24, wherein the depth d_T of the indentations relative to the selected wavelength λ in air is selected as follows:

$$0.05\ \lambda \leq d_T \leq 0.2\ \lambda.$$

49. A light coupling element as claimed in one of claim 24, wherein a duty cycle, defined as the ratio of elevation width to the distance of successive indentations, is selected to be 0.2 to 0.8.

50. A light coupling element as claimed in one of claim 24, wherein a duty cycle, defined as the ratio of elevation width to the distance of successive indentations, is selected to be 0.4 to 0.6.

51. A light coupling element as claimed in claim 25, wherein a duty cycle, defined as the ratio of elevation width to the distance of successive elevations, is selected to be 0.2 to 0.8.

52. A light coupling element as claimed in claim 25, wherein a duty cycle, defined as the ratio of elevation width to the distance of successive elevations, is selected to be 0.4 to 0.6.

53. A light coupling element as claimed in claim 24, wherein the surface (3) is the surface of a layer system (1a) with at least one layer which is applied onto a support (15).

54. A light coupling element as claimed in claim 51, wherein the surface of the support (15) in the region has the same indentation structure as the surface of the layer system (1a) and that, in top view, the structures are aligned one on another.

55. A light coupling element as claimed in claim 51, wherein the material of the support (15) has a refractive index for the light of the selected wavelength (λ) which is lower than the refractive index of a layer material of the layer system.

56. A light coupling element as claimed in claim 51, wherein the layer system has at least one layer of a high-refractive material.

57. A light coupling element as claimed in claim 54, wherein the high-refractive material is at least one of the following materials: Ta_2O_5, TaO_2, NbO_5, ZrO_2, ZnO, HfO_2.

58. A light coupling element as claimed in claim 51, wherein the layer system has a thickness d_s of 2 nm to 20000 nm.

59. A light coupling element as claimed in claim 51, wherein the layer system has a thickness d_s of 20 nm to 4000 nm.

60. A light coupling element as claimed in claim 51, wherein the layer system has a thickness d_s of 40 nm to 600 nm.

61. A light coupling element as claimed in claim 51, wherein the layer system has a thickness d_s of 150 nm.

62. A light coupling element as claimed in claim 51, wherein the layer system, relative to the selected wavelength λ in air, has a thickness d_s for which, relative to the selected wavelength λ, in air applies:

$$0.01\ \lambda \leq d_s \leq 10\ \lambda.$$

63. A light coupling element as claimed in claim 51, wherein the layer system, relative to the selected wavelength λ in air, has a thickness d_s for which, relative to the selected wavelength λ, in air applies:

$$0.01\ \lambda \leq d_s \leq 2\ \lambda.$$

64. A light coupling element as claimed in claim 51, wherein the layer system, relative to the selected wavelength λ in air, has a thickness d_s for which, relative to the selected wavelength λ, in air applies:

$$0.2\ \lambda \leq d_s \leq 0.3\ \lambda.$$

65. A light coupling element as claimed in claim 25, wherein the surface (3) is the surface of a layer system (1a) with at least one layer, which is applied onto a support (15).

66. A light coupling element as claimed in claim 63, wherein the surface of the support (15) in the region has the same elevation structure as the surface of the layer system (1a) and that, in top view, the structures are aligned one on another.

67. A light coupling element as claimed in claim 63, wherein the material of the support (15) has a refractive index for the light of the selected wavelength (λ) which is lower than the refractive index of a layer material of the layer system.

68. A light coupling element as claimed in claim 63, wherein the layer system has at least one layer of a high-refractive material, preferably of at least one of the following materials: Ta_2O_5, TaO_2, NbO_5, ZrO_2, ZnO, HfO_2.

69. A light coupling element as claimed in claim 63, wherein the layer system has a thickness d_s of 2 nm to 20000 nm.

70. A light coupling element as claimed in claim 63, wherein the layer system has a thickness d_S of 20 nm to 4000 nm.

71. A light coupling element as claimed in claim 63, wherein the layer system has a thickness d_S of 40 nm to 600 nm.

72. A light coupling element as claimed in claim 63, wherein the layer system has a thickness d_S of 150 nm.

73. A light coupling element as claimed in claim 63, wherein the layer system, relative to the selected wavelength λ in air, has a thickness d_S for which, relative to the selected wavelength λ, in air applies:

$$0.01\ \lambda \leq d_S \leq 10\ \lambda.$$

74. A light coupling element as claimed in claim 63, wherein the layer system, relative to the selected wavelength λ in air, has a thickness d_S for which, relative to the selected wavelength λ, in air applies:

$$0.01\ \lambda \leq d_S \leq 2\ \lambda.$$

75. A light coupling element as claimed in claim 63, wherein the layer system, relative to the selected wavelength λ in air, has a thickness d_S for which, relative to the selected wavelength λ, in air applies:

$$0.2\ \lambda \leq d_S \leq 0.3\ \lambda.$$

76. A light coupling element as claimed in claim 24, including elevations (7) between the equidistantly parallel indentations (5_1, 5_2) in top view being rhomboid, rhombus, rectangular or square.

77. A light coupling element as claimed in claim 25, including indentations (5) between the equidistantly elevations (7_1, 7_2) in top view being rhomboid, rhombus, rectangular or square.

78. A light coupling element as claimed in claim 25, including indentations (5) between the parallel elevations (7_1, 7_2) in top view being circular or elliptic.

79. A light coupling element as claimed in claim 24, on an optical analysis platform for substance analyses.

80. A light coupling element as claimed in claim 25, on an optical analysis platform for substance analyses.

81. A light coupling element as claimed in claim 24 in combination with a telecommunication data transmission apparatus.

82. A light coupling element as claimed in claim 25 in combination with a telecommunication data transmission apparatus.

83. A method for realizing polarization independence by means of which a light coupling element with a surface grating acts onto incident light of selected wavelength, comprising: developing the surface grating to be two-dimensionally on the surface such that orthogonal polarization vector components are influenced equally by the grating.

84. A method for reducing a drop size on a light coupling element with surface grating, comprising: providing a surface grating extending in two dimensions so that the drop size developing thereon is reduced. –